

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- NESHAP SOURCE -- RENEWAL

PERMITTEE

American Coupling Company  
Attn: Jim Jablonsky  
40 Chestnut Avenue  
Westmont, Illinois 60559-1128

Application No.: 97060121

I.D. No.: 043095AAT

Applicant's Designation:

Date Received: January 26, 2005

Subject: Vapor Degreaser

Date Issued:

Expiration Date:

Location: 40 Chestnut Avenue, Westmont

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of one batch vapor degreaser as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of Hazardous Air Pollutants (HAPs) from the source to less than major source thresholds (i.e., 10 tons/year for a single HAP). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits for this location.
2. The batch vapor degreaser is subject to 40 CFR Part 63, Subpart T - National Emission Standards for Halogenated Solvent Cleaning. The Illinois EPA is administering this regulation in Illinois on behalf of the United States EPA under a delegation agreement.
3. The batch vapor degreaser must meet the following design and operating requirements, pursuant to 40 CFR 63.463(b) (1) (i) (Option 8):
  - a. The cleaning machine shall have a freeboard ratio of 1.0 or greater.
  - b. The Permittee is required to operate the control option known as reduced room draft. This requires the following operating procedures to be performed [40 CFR 63.463(e) (2) (ii)]:

- i. Ensure that the flow or movement of air across the top of the freeboard area of the solvent cleaning machine or within the solvent cleaning machine enclosure does not exceed 15.2 meters per minute (50 feet per minute) at any time.
  - ii. Establish and maintain the operating conditions under which the wind speed was demonstrated to be 15.2 meters per minute (50 feet per minute) or less.
- c. The Permittee is required to operate the control option known as a dwell. This requires the following operating procedures to be performed [40 CFR 63.463(e) (2) (v)]:
  - i. Determine the amount of time for each type of part or parts basket, or using the most complex part type or parts basket to cease dripping once placed in the vapor zone.
  - ii. Ensure that, after cleaning, each part is held in the solvent cleaning machine freeboard area above the vapor zone for the proper dwell time no less than 35 percent of the time determined for that particular part or parts basket in Condition 3(c) (i).
- d. The cleaning machine shall have an automated parts handling system capable of moving parts or parts baskets at a speed of 3.4 meters per minute (11 feet per minute) or less from the initial loading of parts through removal of cleaned parts [40 CFR 63.463(a) (3)].
- e. The vapor cleaning machine shall be equipped with a device that shuts off the sump heat if the sump liquid solvent level drops to the sump heater coils [40 CFR 63.463(a) (4)].
- f. The vapor cleaning machine shall be equipped with a vapor level control device that shuts off sump heat if the vapor level in the vapor cleaning machine rises above the height of the primary condenser [40 CFR 63.463(a) (5)].
- g. The vapor cleaning machine shall have a primary condenser [40 CFR 63.463(a) (6)].
- h. The parts baskets or the parts being cleaned in an open-top batch vapor cleaning machine shall not occupy more than 50 percent of the solvent/air interface area unless the parts baskets or parts are introduced at a speed of 0.9 meters per minute (3 feet per minute) or less [40 CFR 63.463(d) (2)].
- i. Any spraying operations shall be done within the vapor zone or within a section of the solvent cleaning machine that is not directly exposed to the ambient air (i.e., a baffled or enclosed area of the solvent cleaning machine) [40 CFR 63.463(d) (3)].

- j. Parts shall be oriented so that the solvent drains from them freely. Parts having cavities or blind holes shall be tipped or rotated before being removed from any solvent cleaning machine [40 CFR 63.463(d) (4)].
  - k. Parts baskets or parts shall not be removed until dripping has stopped [40 CFR 63.463(d) (5)].
  - l. During startup of each vapor cleaning machine, the primary condenser shall be turned on before the sump heater [40 CFR 63.463(d) (6)].
  - m. During shutdown of each vapor cleaning machine, the sump heater shall be turned off and the solvent vapor layer allowed to collapse before the primary condenser is turned off [40 CFR 63.463(d) (7)].
  - n. When solvent is added or drained from any solvent cleaning machine, the solvent shall be transferred using threaded or other leakproof couplings and the end of the pipe in the solvent sump shall be located beneath the liquid solvent surface [40 CFR 63.463(d) (8)].
  - o. Each solvent cleaning machine and associated controls shall be maintained as recommended by the manufacturers of the equipment or using alternative maintenance practices that have been demonstrated to the Illinois EPA's satisfaction to achieve the same or better results as those recommended by the manufacturer [40 CFR 63.463(d) (9)].
  - p. Each operator of a solvent cleaning machine shall complete and pass the applicable sections of the test of solvent cleaning operating procedures pursuant to 40 CFR, Part 63 Subpart T Appendix B if requested during an inspection by the Illinois EPA [40 CFR 63.463(d) (10)].
  - q. Waste solvent, still bottoms, and sump bottoms shall be collected and stored in closed containers. The closed containers may contain a device that would allow pressure relief, but would not allow liquid solvent to drain from the container [40 CFR 63.463(d) (11)].
  - r. Sponges, fabric, wood, and paper products shall not be cleaned in the solvent cleaning machine [40 CFR 63.463(d) (12)].
4. The batch vapor degreaser shall be operated according to the following operating and equipment requirements of 35 Ill. Adm. Code 218.183:
- a. Operating Requirements: No person shall operate the batch vapor degreaser unless:
    - i. Solvent carry out emissions are minimized by allowing parts to dry within the degreaser until visually dry;

- ii. The degreaser is not loaded to the point where the vapor level would drop more than 10 cm (4 in) when the workload is removed from the vapor zone;
  - iii. Solvent leaks are repaired immediately;
  - iv. Waste solvent is stored in covered containers only and not disposed of in such a manner that more than 20% of the waste solvent (by weight) is allowed to evaporate into the atmosphere;
  - v. Water is not visually detectable in solvent exiting from the water separator; and
  - vi. Exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser open area is not used, unless necessary to meet the requirements of the Occupational Safety and Health Act (29 U.S.C. Section 651 et. seq.).
- b. Equipment Requirements: No person shall operate the batch vapor degreaser unless;
- i. The degreaser is equipped with a cover designed to open and close easily without disturbing the vapor zone;
  - ii. The degreaser is equipped with the following switches;
    - A. One which shuts off the sump heat if the amount of condenser coolant is not sufficient to maintain the designed vapor level; and
    - B. One which shuts off the spray pump if the vapor level drops more than 10 cm (4 in) below the bottom condenser coil; and
    - C. One which shuts off the sump heat source when the vapor level exceeds the design level.
  - iii. A permanent conspicuous label summarizing the operating procedure is affixed to the degreaser.
5. Emission and operation of the batch vapor degreaser shall not exceed the following limits:

Solvent Usage		VOM (HAP) Emissions	
(Tons/Month)	(Tons/Year)	(Tons/Month)	(Tons/Year)
200	1,550	1.2	9.5

These limits are based on the maximum solvent usage, trichloroethylene being the solvent used, solvent density of 12.2 lb/gal and emissions determined by material balance. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

Solvent usage shall be determined from the following equation:

$$U = V - W \times C/100$$

Where:

U - Solvent usage

V - Virgin solvent added to the process (gal)

W - Certified amount of waste shipped off for recycling (gal)

C - Certified VOM content of waste solvent (wt. %)

6. The Permittee shall perform the following monitoring procedures pursuant to 40 CFR 63.466.
  - a. The Permittee shall monitor the reduced room draft [40 CFR 63.466(d)].
    - i. If the reduced room draft is maintained by controlling room parameters (i.e., redirecting fans, closing doors and windows, etc.), the Permittee shall measure the windspeed within 6 inches above the top of the freeboard area of the solvent during an initial monitoring test of windspeed and room parameters, quarterly monitoring of windspeed, and weekly monitoring of room parameters using the following procedures [40 CFR 63.466(d)(1)]:
      - A. Determine the direction of the wind current by slowly rotating a velometer or similar device until the maximum speed is located.
      - B. Orient a velometer in the direction of the wind current at each of the four corners of the machine.
      - C. Record the reading for each corner.
      - D. Average the values obtained at each corner and record the average wind speed.
      - E. Monitor on a weekly basis the room parameters established during the initial compliance test that are used to achieve the reduced room draft.
    - ii. If an enclosure (full or part) is used to achieve a reduced room draft, the Permittee shall conduct an initial monitoring test and thereafter monthly monitoring tests of the wind speed within the enclosure shall be performed. The following procedures shall be performed on a monthly basis [40 CFR 63.466(d)(2)]:

- A. Determine the direction of the wind current in the enclosure by slowly rotating a velometer inside the entrance to the enclosure until the maximum speed is located.
  - B. Record the maximum wind speed.
  - C. Visually inspect the enclosure to determine if it is free of cracks, holes and other defects.
- b. The Permittee shall perform the following test and monitoring procedures to determine the proper dwell time [40 CFR 63.465(d)]:
  - i. Determine the amount of time for the part or parts basket to cease dripping once placed in the vapor zone. The part or parts basket used for this determination must be at room temperature before being placed in the vapor zone.
  - ii. The proper dwell time for parts to remain in the freeboard area above the vapor zone is no less than 35 percent of the time determined in subparagraph (i) of this paragraph.
  - iii. The actual dwell time shall be determined by measuring on a monthly basis the period of time that parts are held within the freeboard area of the solvent cleaning machine after cleaning.
- c. The Permittee shall monitor the hoist speed in the following manner [40 CFR 63.466(c)(1)]:
  - i. Determine the hoist speed by measuring the time it takes for the hoist to travel a measured distance. The speed is equal to the distance in meters or feet divided by the time in minutes.
  - ii. The monitoring shall be conducted monthly. If after the first year, no exceedances of the hoist speed are measured, the Permittee may begin monitoring the hoist speed quarterly.
  - iii. If an exceedance of the hoist speed occurs during quarterly monitoring, the monitoring frequency must be monitored monthly until another year of compliance without an exceedance is demonstrated.
- 7. The Permittee shall retain the following records, pursuant to 40 CFR 63.467:
  - a. The records maintained for the lifetime of the solvent cleaning machine [40 CFR 63.467(a)]:
    - i. Owner's manuals, or if not available, written maintenance and operating procedures, for the solvent cleaning machine and control equipment.

- ii. The date of installation for the solvent cleaning machine and all of its control devices. If the exact date for the installation is not known, a letter certifying that the cleaning machine and its control devices were installed prior to, or on, November 29, 1993, or after November 29, 1993, may be substituted.
  - iii. Records of the tests required in Condition 6(b)(i) and (ii) to determine an appropriate dwell time for each part or parts basket.
  - iv. Records of the halogenated HAP solvent content for each solvent used in the solvent cleaning machine.
- b. The record maintained for a period of 5 years [40 CFR 63.467(b)]:
  - i. Records of the initial monitoring test and thereafter, monthly monitoring tests of the wind speed within the vapor degreaser enclosure.
  - ii. The Permittee shall maintain monthly records of the actual dwell time determined as required by Condition 6b(iii).
  - iii. Monthly or quarterly records of the hoist speed as specified in Condition 6(c).
  - iv. The Permittee shall maintain information on the actions taken to comply with Conditions 3 and 4. This information shall include records of written or verbal orders for replacement parts, a description of the repairs made, and additional monitoring conducted to demonstrate that monitored parameters have returned to accepted levels.
  - v. The Permittee shall maintain the following records effective upon issuance of this permit:
    - A. Monthly and annual solvent usage in pounds or tons.
    - B. Which solvent is used.
- 8. The Permittee shall submit the following reports to the Illinois EPA:
  - a. An initial statement of compliance for the batch vapor degreaser pursuant to 40 CFR 63.468(d). This report shall be submitted to the Illinois EPA no later than 150 days after the compliance date, December 2, 1997. The report shall include the following:
    - i. The name and address of the owner or operator.
    - ii. The address (i.e., physical location) of the solvent cleaning machine(s).
    - iii. A list of the control equipment used to achieve compliance for each solvent cleaning machine.

- iv. For each piece of control equipment required to be monitored, a list of the parameters that are monitored and the values of these parameters measured on or during the first month after the compliance date.
- b. The Permittee shall submit an annual report for the batch vapor degreaser by February 1 of the year following the one for which the reporting is being required pursuant to 40 CFR 63.468(f). The report shall include the following:
  - i. A signed statement from the facility owner or his designee stating that "All operators of solvent cleaning machines have received training on the proper operation of solvent cleaning machines and their control devices sufficient to pass the test required by 40 CFR 63.463(d)(10)".
  - ii. An estimate of solvent consumption for each solvent cleaning machine during the reporting period.
- c. The Permittee shall submit an exceedance report for the batch vapor degreaser to the Illinois EPA semiannually [40 CFR 63.468(h)] except when, the Illinois EPA determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source or, an exceedance occurs. Once an exceedance has occurred the owner or operator shall submit an exceedance report quarterly until a request to reduce reporting frequency is approved [40 CFR 63.468(i)]. Exceedance reports shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. The exceedance report shall include the following information:
  - i. If an exceedance has occurred, the reason for the exceedance and a description of the actions taken, to minimize or prevent future exceedances.
  - ii. If no exceedances of a parameter have occurred, or a piece of equipment has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.
- 9. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Agency's regional office at the following address unless otherwise indicated:



Page 9

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
9511 West Harrison  
Des Plaines, Illinois 60016

If you have any questions on this permit, please call Valeriy Brodsky at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

DES:VJB:

cc: Region 1

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emission from the Vapor Degreaser operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. This is a usage of 9.5 tons of trichloroethylene per year. The resulting maximum emissions are below the levels, e.g., 10 tons per year for a single HAP at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that material is handled, and control measures are more effective than required in this permit.

Emission Unit	VOM (HAP - Trichloroethylene) Emission (tons/yr)
Degreaser	9.5

VJB: